

EXHIBIT “9”

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

IMMERSION SYSTEMS LLC
Petitioner

v.

MIDAS GREEN TECHNOLOGIES, LLC
Patent Owner

IPR2021-01176
U.S. PATENT NO. 10,405,457

PATENT OWNER PRELIMINARY RESPONSE TO PETITION

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EXHIBIT LIST

2001	Amended Scheduling Order entered in <i>Midas Green Technologies, LLC v. Immersion Systems LLC</i> , Civ. No. 4-20-cv-00555, Dkt. 64 (NDTX May 5, 2021).
2002	Defendant's Preliminary Invalidity Contentions served in <i>Midas Green Technologies, LLC v. Immersion Systems LLC</i> , Civ. No. 4-20-cv-00555.
2003	Plaintiff's Opening Claim Construction Brief filed in <i>Midas Green Technologies, LLC v. Immersion Systems LLC</i> , Civ. No. 4-20-cv-00555, Dkt. 76.
2004	U.S. Provisional Patent App. No. 61/737,200 ("First Provisional").
2005	Defendant's Supplemental Invalidity Contentions served in <i>Midas Green Technologies, LLC v. Immersion Systems LLC</i> , Civ. No. 4-20-cv-00555.

I. INTRODUCTION

Midas Green Technologies, LLC (the “Patent Owner” or “MGT”) submits this Preliminary Response to the Petition for *Inter Partes* Review (“Pet.” or “Petition”) of United States Patent No. 10,405,457 (“the ’457 patent” or “Ex-1001”) filed by Immersion Systems LLC (“Petitioner”).

The Board should exercise its discretion under § 325(d) to deny the Petition. Petitioner needlessly multiplies the petitioned proceeding by advancing no less than *six* redundant grounds.¹ To make matters worse, each ground relies primarily or exclusively on the same reference (Best) scrutinized by the Examiner in every office action that issued during prosecution. The secondary references (Krajewski and Cray) cited in Ground 1 of the Petition likewise both appear on the face of the ’457 patent as having been cited by the Examiner during prosecution. These are textbook circumstances warranting discretionary denial under § 325(d).

Discretionary denial is further warranted under 35 U.S.C. § 314(a). Among other relevant factors favoring denial, the parallel district court litigation will be past the *Markman* stage by the time the Board renders a decision on institution, the parallel litigation raises overlapping issues, and jury trial is scheduled to be complete prior to the statutory deadline for a final written decision.

Because the present circumstances strongly favor discretionary denial, the Board need not reach the substantive merits of the Petition. A substantive analysis is nevertheless presented herein because the Board held in *Fintiv* that “weakness on

¹ See n.10, *infra*.

the merits” or even a “closer call” weigh in favor of discretionary denial, particularly where other factors supporting denial are present. On the merits, the Petition fails to meet the threshold burden of proving there is a reasonable likelihood that at least one challenged claim is unpatentable.

For a myriad of reasons, therefore, the Board should decline institution of trial.

II. OVERVIEW OF THE '457 PATENT

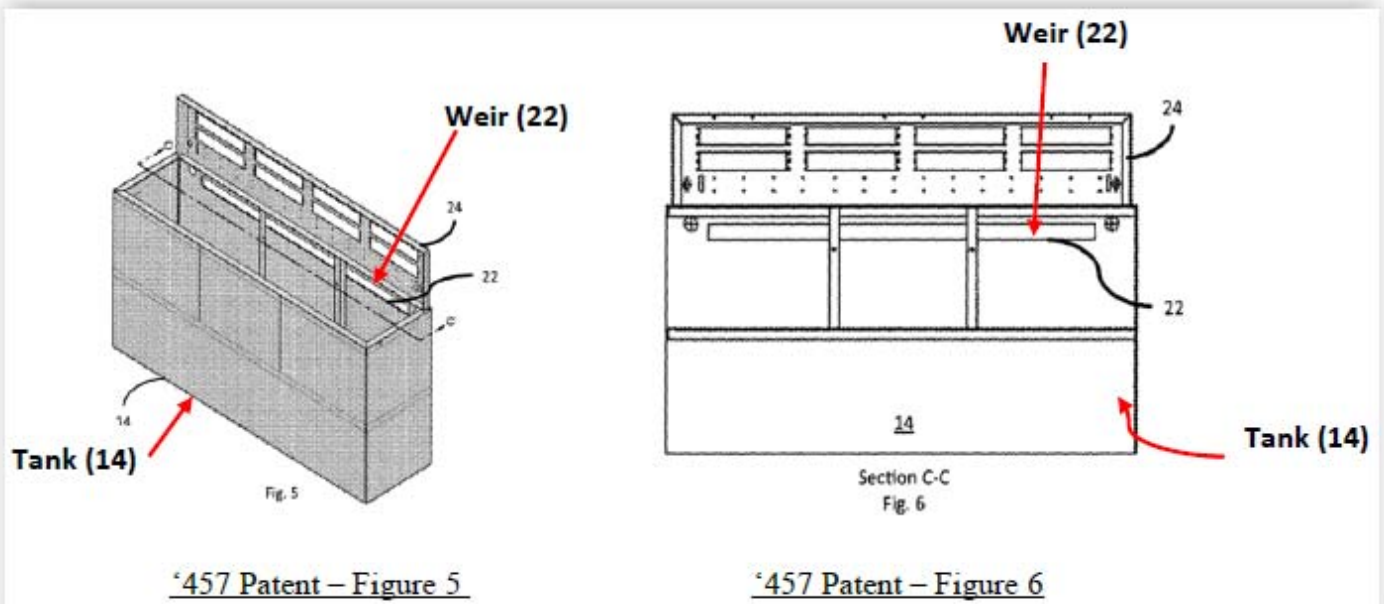
The '457 patent is entitled “Appliance Immersion Cooling System.” The patent issued on Sep. 3, 2019, from U.S. Patent Application No. 14/355,533 filed on Dec. 13, 2013. The '457 patent generally relates to the liquid cooling of electric/electronic appliances. The disclosed technology has application, for example, in immersion cooling systems designed to pull heat away from heat-generating electronics, such as, for example, those used in data centers and cryptocurrency farming operations.

Certain embodiments are described as including interoperating features, such as those included in the following non-exhaustive list:

- a tank (14) that holds a dielectric fluid (*e.g.*, a liquid that does not easily conduct electricity);
- a set of “appliance slots” (18) distributed vertically within the tank (14) for holding “electrical appliances” (16) that generate heat to be removed by the dielectric fluid;
- a plenum (36) structure at the bottom of the tank (14) that dispenses the dielectric fluid uniformly upward through each of the appliance slots (18); and

- a weir (22) (i.e., an overflow structure or barrier that determines the level of a liquid) that is integrated into a long wall of the tank (14) and that is “adapted to facilitate substantially uniform recovery of the dielectric fluid through each appliance slot.”

See generally '457 patent and Figures 5, 6, 7, & 12. For ease of reference, Figs. 5 and 6 are reproduced below (with annotations added by MGT).



The specification of the '457 patent describes example embodiments adapted to “make the flow dielectric fluid more uniform upwardly through the appliance slots” (Ex-1001, 4:27–28) and “to facilitate substantially uniform recovery of the dielectric fluid flowing through each of the appliance slots” (*id.*, 3:56–58). In certain embodiments, a plenum (36) extends transverse to a long wall of the tank and is configured to dispense, in a substantially equal manner, a dielectric fluid upward through each appliance slot of the tank.

The specification emphasizes the preferential goal of “substantially equal flow of the dielectric fluid upwardly into each appliance slot.” *Id.* at 4:21–24. To that end, in a preferred embodiment, a long, open weir (22) is “integrated into the long rear wall of the tank.” *Id.*, Fig. 5; 3:3–6. The weir (22) extends to substantially the entire length of the tank, adjacent all the appliance slots. This arrangement facilitates substantially uniform recovery of the dielectric fluid as it flows through each appliance slot across the length of the tank. *See* Ex-2003 at 18 (citing the Declaration of Dr. Maruice Marongiu). If the weir (22) were not so extended, substantially uniform recovery of the dielectric fluid would not be achieved. *Id.*

The patent specification provides additional detail concerning the structure of weir (22), including how it is adapted to facilitate substantially uniform recovery, by expressly contrasting the claimed invention against other approaches. For example, the specification generally describes U.S. Patent Application Publication No. 2011/0132579 to Best as “disclos[ing] an appliance immersion tank system, includ[ing] support apparatus for extracting waste heat from the tank cooling fluid and dissipating to the environment the heat so extracted.” Ex-1001, 2:25–31.

Although the patent specification notes that Best discloses an improvement over certain prior approaches, the specification expressly distinguishes and disparages Best from the claimed inventions for at least the following two reasons (among others). First, the approach in Best exhibited “generally non-uniform flow patterns through the several appliance slots within the tank, potentially resulting in uneven cooling across all slots.” Ex-1001, 2:31–34. Second, Best is further

disparaged as problematic in that it “constricted dielectric fluid supply and return ports resulting in unnecessarily high fluid flow velocities at the respective points of connection to the tank.” *Id.*, 2:34–36.

At a minimum, therefore, the ’457 patent distinguished Best as lacking a weir (22) that is integrated into a long wall of the tank (14) and that is adapted to facilitate *substantially uniform* recovery of the dielectric fluid through each appliance slot. It is particularly significant here that these explicit distinctions over Best are expressly stated in the patent specification itself, and hence are part of the intrinsic record. This intrinsic evidence speaks for itself in refuting Petitioner’s reliance on the same Best reference (albeit the issued patent version) in *every one* of the *six* redundant grounds raised in the Petition, including in asserting Best *alone* under Ground 4.² As explained further below, the Background section of the ’457 patent also expressly disparages and distinguishes both the Krajewski and Cray references, which are asserted as alternative secondary references under Ground 1 of the Petition.

III. RELATED PROCEEDING

The ’457 patent is involved in one parallel litigation filed on May 29, 2020, in the Northern District of Texas—namely, *Midas Green Technologies, LLC v. Immersion Systems LLC*, Civ. No. 4-20-cv-00555.

² As Petitioner acknowledges, “Best (US 2011/0132579) is the published U.S. Patent Application which ultimately resulted in the issuance of U.S Patent No. 10,123,463 to Best.” Pet. 6, n.3. Petitioner opted to cite the issued patent version of Best. *See also* n.10, *supra*.

IV. THE BOARD SHOULD DENY THE PETITION UNDER § 325(D)

The Board should deny the Petition as presenting no less than six redundant grounds³ that *all* rely primarily or exclusively on the same reference (Best) scrutinized by the Examiner during prosecution.⁴ The July 2019 Trial Practice Guide Update (“TPG”) reiterates six, non-exclusive factors (the *Becton* factors) that the Board considers when determining whether to exercise its discretion to deny institution under § 325(d).⁵ Those factors are:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Slip. Op. at 17-18.

³ See n.10, *supra*.

⁴ See n.2, *infra*.

⁵ TPG at 28-31 (citing *Becton Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, at 17–18 (Dec. 15, 2017)).

The Board discussed a two-part framework for analyzing the *Becton* factors in *Advanced Bionics*.⁶ Under *Advanced Bionics*, the Board first evaluates Becton factors (a), (b), and (d) to determine whether the same or substantially the same art or arguments were previously presented to the Office. If this condition is satisfied, then the Board will review factors (c), (e), and (f) to determine whether the petitioner has demonstrated a material error by the Office.

The Board has found that *Becton* factor (a) favors denial where the “art asserted in the Petition is identical to that involved during prosecution.” *PUMA North America, Inc. v. NIKE, Inc.*, IPR2019-01042, Paper 10 (PTAB Oct. 31, 2019) (designated informative March 24, 2020). All grounds of the Petition rely on the same Best reference that the Examiner addressed in *every* office action issued during prosecution. Indeed, Ground 4 relies *exclusively* on Best. Pet. 2. Ground 1 purports to rely on Best in combination with two other references (“Krajewski and/or Cray”) that are also identified on the face of the ’457 patent as having been “cited” and hence considered by the Examiner. *Id.* The Petition does not raise even one ground that relies exclusively on art not considered by the Examiner during prosecution.

Nevertheless, Petitioner falsely asserts that “[t]he same or substantially the same prior art or arguments were never considered by the Examiner.” Pet. 63. Petitioner contradicts its own assertion by offering contrary party admissions. Petitioner acknowledges, as it must, that the *same* Best reference asserted in each

⁶ *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (Feb. 13, 2020) (designated precedential).

ground of the Petition “was considered [by the Examiner] *in each office action*.” Pet. 10. (emphasis added). Petitioner further acknowledges that both Krajewski and Cray are identified on the face of the ’457 patent as having been cited by the Examiner during prosecution. *Id.* While the record speaks for itself, Petitioner’s admissions underscore that *Becton* factor (a) strongly favors denial here.

Petitioner has not avoided § 325(d) merely by adding two redundant grounds to the Petition (Grounds 2 and 3) that each purport to rely on Best in view of a respective secondary reference not appearing on the face of the ’457 patent. Pet. 10. In *Advanced Bionics*, the petition similarly asserted a two-reference obviousness combination, where the primary reference had been asserted by the examiner in a rejection during prosecution and the secondary reference had not been considered by the examiner. *Advanced Bionics*, Slip. Op. 13-17. The Board nevertheless found that the asserted ground “includes only the same or substantially the same prior art that was previously presented to the Office.” *Id.* (internal quotations and citation omitted).

The Board reached a similar conclusion in *Dorco Co. v. Gillette Co.*, IPR2017-00500, Paper 7 (PTAB June 21, 2017). There, the Board declined institution under § 325(d) where both grounds of the petition asserted a primary reference applied by the examiner during prosecution, in combination with respective secondary references not applied or (in at least one instance) not even considered by the examiner during prosecution. The Board determined that “Petitioners’ interests in being heard during an *inter partes* review are outweighed

by the Board’s interests in conserving the resources of the Office and granting Patent Owner repose on issues and prior art that have been considered previously.” *Dorco*, Slip Op. at 20.

Here, the Petition does not even attempt to justify the redundancy of Grounds 2 and 3 with respect to the other grounds. In purporting to challenge claim 1 under Ground 2, for example, the Petition first advances Best for certain limitations and then separately argues, apparently in the alternative, that “Oktaay also discloses” the same limitation. *See, e.g.*, Pet. 38–39. There is no explanation as to whether or how it would have been obvious *to combine* Best and Oktaay in a manner that would allegedly render obvious *a specific claim limitation*, much less any *motivation* to do so. Petitioner’s reliance on Oktaay in the alternative concedes that the Petition presents the same or substantially the same art previously presented to the Office.

Ground 3 of the Petition fares no better. In purporting to challenge claim 1 under Ground 3, for example, the Petition first advances Best and then separately argues, again in the alternative, that “Gryzhin also teaches” the same limitation. *See, e.g.*, Pet. 49–50. As with Ground 2, Ground 3 offers no explanation as to whether or how it would have been obvious *to combine* Best and Gryzhin in a manner that would allegedly render obvious *a specific claim limitation*, much less any *motivation* to do so. Petitioner’s reliance on Gryzhin in the alternative concedes that the Petition presents the same or substantially the same art previously presented to the Office.

Because the record reveals that the same or substantially the same art or arguments were previously presented to the Office, Petitioner has the burden to

demonstrate a material error by the Office (*e.g.*, by applying *Becton* factors (c), (e), and (f)). This Petitioner failed to do.

Becton factor (c) clearly favors denial. In failing to establish otherwise, Petitioner overlooks the extent to which the asserted art was evaluated during examination. It is undisputed that the same Best reference, asserted as either the primary or sole reference in each ground of the Petition, “was considered [by the Examiner] *in each office action*.” Pet. 10. (emphasis added). Thus, the extent to which the primary reference was evaluated during examination could not have been any greater here.

Petitioner has not avoided § 325(d) by arguing “Krajewski/Cray were not discussed in any office action or remarks thereto.” Pet. 64. Both Krajewski and Cray are identified on the face of the ’457 patent as having been “cited” and hence considered by the Examiner. In a designated opinion, the Board instructs it would improperly “exalt form over substance, if Section 325(d) could be avoided entirely by merely adding an already-considered incremental reference to a previously considered” reference expressly applied by the Examiner during prosecution. *Kayak Software Corp. v. Int’l Bus. Mach. Corp.*, CBM2016-00075, Paper 16 (PTAB Dec. 15, 2016) (designated informative on March 21, 2018).

Under the circumstances, it is reasonable to infer from the intrinsic record that the Examiner thoroughly examined the claims that issued in view of the Krajewski and Cray references, together with all other references of record (including Best). The Krajewski and Cray references are both specifically referenced and expressly

disparaged in the Background section of the '457 patent specification. Ex-1001, 1:33–2:22. To be certain that the Examiner considered the Krajewski and Cray references (among others), both were also submitted during prosecution in an Information Disclosure Statement. The Examiner then marked those references as having been considered. It is significant here that the seven named inventors and the Examiner all found Krajewski and Cray to not be invalidating, either alone or in combination with the other references of record (including each other). The Petition fails to persuasively explain why the Office should now second guess these findings.

Becton factor (e) also favors denial because Petitioner has failed to sufficiently point out how the Examiner allegedly erred in its evaluation of same references asserted in the Petition. According to Petitioner, “[t]he Examiner erred by failing to ascertain whether the ‘weir/reservoir’ arrangement was present in prior art already before him, and failing to search and identify actual prior art containing that limitation (of which there is an abundance).” Pet. 64. Petitioner is wrong.

The prosecution history expressly refutes Petitioner’s gross misrepresentation. For example, the Examiner repeatedly stated on the record that “Best does not teach the weir and reservoir arrangement.” Ex-1002, 43, 45. In addition, the Examiner summarized the substance of an applicant-initiated interview as follows: “[t]he features of the ‘plenum’ and ‘weir’ of claim 1 were discussed *with relation to the art currently of record and the newly appended JP reference.*” *Id.* at 119 (emphasis added). In view of these unambiguous Examiner statements of record, there can be no question that the Examiner carefully considered whether the

references of record (including Best, Krajewski, and Cray) disclose each claim limitation, including the “weir and reservoir arrangement.”⁷ The claims that issued were found to be allowable over all references of record (including combinations thereof).

The prosecution history also speaks for itself in refuting Petitioner’s disparaging speculation that the Examiner failed to search for art containing the “weir and reservoir arrangement” as claimed. Pet. 64. During prosecution, the Examiner submitted multiple search reports and corresponding office actions confirming a sufficiently diligent search and analysis. *See, e.g.*, Ex-1002 at 33–49, 118–121, 139–148, 162–174.

That the Examiner performed a sufficient search for relevant references and, nevertheless, found none to be invalidating is only underscored by the references Petitioner chose to assert in its Petition. With vastly more time and resources at its disposal, the purported best that Petitioner could come up with (judging by how Petitioner opted to order its redundant grounds) was a list of references previously cited and considered by the Examiner (i.e., Best, Krajewski and Cray). Petitioner can hardly fault the Examiner for failing to *even attempt* to search for relevant art where Petitioner does not allege to have found anything better.

⁷ These Examiner statements of record also directly refute other unsubstantiated assertions on the Petition. *See, e.g.*, Pet. 64 (“For the added ‘weir/reservoir arrangement’ limitation, the Examiner ultimately never considered any art at all[.]”); *id.*, 65 (“the only art considered by the Examiner against the claims allowed was overcome for non-substantive reasons (the date of the secondary JP '100 reference).”

In purporting to address *Becton* factor (f), Petitioner mispresents it “does not seek ‘reconsideration.’” Pet. 65. The record proves otherwise. At a minimum, Petitioner overlooks that Ground 4 of the Petition relies *exclusively* on Best. Institution would thus require the Board to reconsider the Examiner’s determination that Best does not invalidate claim 11 (or claim 14 depending therefrom) at least because “Best does not teach the weir and reservoir arrangement.” Ex-1002, 45. To make matters worse, Petitioner alleges its “*Petition accepts the conclusions reached by the Examiner in all respects of his analysis of Best.*” Pet. 10 (emphasis by Petitioner). Taking Petitioner at its word, Petitioner cannot prevail on Ground 4 at least because Petitioner’s sole reliance on Best directly *contradicts* the Examiner’s conclusion that Best is deficient as to claim 11. Petitioner cannot have it both ways.

Petitioner compounds its error with respect to Ground 1, which purports to rely on “Best in view of Krajewski and/or Cray.” Pet. 2. This too would require the Board to reconsider the Examiner’s determination that the art of record (including Best, Krajewski, Cray, and combinations thereof) is not invalidating. *See, e.g.*, Ex-1002, 43, 45. For multiple reasons, therefore, Petitioner has failed to demonstrate, under *Becton* factor (f), that its Petition does not seek reconsideration of either the art or the arguments previously considered during prosecution.

Redundant Grounds 2 and 3 only underscore that *Becton* factor (f) weighs in favor of denial. As explained above, in purporting to rely primarily on Best, and merely advancing Oktay and Gryzhin in the alternative as allegedly “also” teaching certain limitations, Petitioner concedes that the Petition presents the same

or substantially the same art previously presented to the Office. Petitioner thus effectively asks the Board to reconsider art or arguments previously considered during prosecution.

Under the proper analysis, as set forth in *Becton* and its progeny opinions addressed above, the present circumstances present a textbook case for discretionary denial under § 325(d).

V. GIVEN THE UPCOMING TRIAL IN PARALLEL LITIGATION, THE BOARD SHOULD EXERCISE DISCRETION UNDER § 314(A)

Discretionary denial is also independently warranted under 35 U.S.C. § 314(a) because institution would be an inefficient duplication of multiple pending litigations. Under § 314(a), the Director has discretion to deny institution. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016). As noted above, the '457 patent is involved in one parallel litigation filed on May 29, 2020, in the Northern District of Texas—namely, *Midas Green Technologies, LLC v. Immersion Systems LLC*, Civ. No. 4-20-cv-00555.

The Board considers the presence and status of parallel district court litigation in determining institution. *NHK Spring Co., Ltd. v. Intri-plex Technologies*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”) and *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”); *see also General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017) (“[W]e recognize that an objective of the AIA is to provide an effective and efficient alternative to district court litigation.”).

The precedential *Fintiv* opinion sets forth a non-exhaustive list of factors that balance considerations of system efficiency and fairness when a patent owner raises an argument for discretionary denial due to the advanced state of a parallel proceeding(s). *Fintiv*, IPR2020-00019, Paper 11 at 5–6. The factors are:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id.

These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding. As explained below, there is some overlap among these factors. Some facts may be relevant to more than one factor. Therefore, in evaluating the factors, the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *See* TPG at 58 (quoting 35 U.S.C. § 316(b)). A holistic view of the factors set forth in *Fintiv* reveal the present circumstances favor discretionary denial.

1. *Whether a stay exists or evidence exists that one is likely to be granted if a proceeding is instituted*

The first factor favors denial. Factor 1 asks whether “evidence exists that [a stay] may be granted if a proceeding is instituted.” *Fintiv*, Slip. Op. 6. The district court case is not stayed, no party has moved for stay, Petitioner identifies no instance where a stay has been granted by the court under similar circumstances, and Petitioner does not unambiguously express in its Petition even a *present intent* to move for stay if an IPR trial is instituted. Pet. 66. Under the circumstances, this factor favors denial.

2. *Proximity of the court’s trial date to the Board’s projected statutory deadline*

The second factor favors denial because trial in court would precede a final written decision if an IPR trial is instituted here. On May 5, 2021, the Court granted the parties’ Joint Motion for Leave to Modify the Scheduling Order. Per the modification, jury trial is set for October 11, 2022. Ex-2001, 3. In its Order, the Court stated “[t]he parties are advised that future requests to extend deadlines or modify the Scheduling Order will be disfavored and will not be granted by the Court absent good cause.” *Id.* The Court later referenced this same instruction in denying a subsequent motion to modify the schedule. *Midas Green Technologies, LLC v. Immersion Systems LLC*, Civ. No. 4-20-cv-00555, Dkt. 73 (NDTX Aug. 18, 2021).

Thus, in the one and only parallel litigation involving the ’457 patent, jury trial is set to occur three months before the statutory deadline for a final written

decision (on Jan. 14, 2023). In the designated *Fintiv II* opinion, the Board found this factor to favor denial under even less of a time difference between expected completions of parallel proceedings. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 13 (PTAB May 13, 2020) (designated informative) (“*Fintiv II*”) (“Because the currently scheduled District Court trial is scheduled to begin two months before our deadline to reach a final decision, this factor weighs somewhat in favor of discretionary denial in this case.”). Petitioner does not deny or dispute that this factor favors discretionary denial.

3. *Investment in the parallel proceeding by the court and parties*

The third factor favors denial due to ongoing investment in the parallel litigation, and the continued investment that is expected to be completed by the time the Board renders its decision on institution. The parties long ago submitted respective preliminary contentions on infringement and invalidity (on Nov. 20, 2020 and on Jan. 11, 2021, respectively).⁸ In addition, claim construction briefing is *already* complete, and at the time of the anticipated decision on institution, the Court will almost certainly have already issued its *Markman* Order. Moreover, significant discovery has already occurred. By way of example, the parties have exchanged written discovery; MGT has already produced approximately 46,056 pages of documents to Immersion; Immersion has already produced approximately 37,623 pages of documents to MGT; MGT has already taken fact deposition of Immersion’s

⁸ Due at least to the submission of validity contentions and claim construction briefing, it is misleading for Petitioner to assert to the Board that “[t]he parties ... have not substantively addressed validity.” Pet. 66.

CTO Chase Blackmon; and more depositions are expected to be noticed and scheduled by both sides in the coming days.

The Board found this factor to slightly favor denial under similar circumstances in *Fintiv II*. There, the Board found this factor weighed in favor of discretionary denial even though “fact discovery is in its early stages, with document production ongoing and depositions just getting underway, expert reports are not yet due, and substantive motion practice is yet to come.” *Fintiv II*, Slip. Op. at 13-14. Applying the same reasoning here, this factor weighs in favor of denial.

4. *Overlap between issues raised in the petition and in the parallel proceeding*

The fourth factor favors denial. *Fintiv* states, “if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial.” Slip. Op. 12. Here, there is *complete* overlap in the validity issues raised in these parallel proceedings. Consequently, the efficiency concerns under this factor are substantial.

Petitioner served Preliminary Invalidity Contentions (“PIC” or “Ex-2003”) and Supplemental Invalidity Contentions (“SIC” or “Ex-2005”) in the parallel litigation. Those contentions served in litigation totally subsume all theories advanced in the Petition. *See generally* Ex-2003, Ex-2005. Specifically, both proceedings purport to challenge the same claims 1, 5, 6, 10, 11, and 14. *See* Ex-2003, n.1; Ex-2005, 6. The references asserted in the Petition also completely overlap with those identified in the parallel proceeding. For example, the PIC purport to reserve the right to rely on all combinations of Best (Ex-2003, 3), Cray

(*id.* at 4), and Krajewski (*id.* at 5). The SIC newly add the same Gryzhin and Oktay references, and again broadly purport to preserve the right to rely on each in combination with Best (and all other identified references). Ex-2005, 3–4.

Petitioner completely ignores these overlapping issues in misrepresenting to the Board that “[t]he prior art presented in this Petition (Oktay and Gryzhin) is not currently at issue in the District Court *and thus the issues do not overlap.*” Pet. 66 (emphasis added). As of the filing date of the Petition, “the issues” concerning Best, Krajewski, and Cray clearly all overlapped. Petitioner presumably also knew, as of the filing date of its Petition, that that it would soon supplement its invalidity contentions served in litigation to include the same assertions of Oktay and Gryzhin. Thus, notwithstanding Petitioner’s misrepresentations to the contrary, this factor strongly favors denial because the record reveals the Petition includes the *exact same* claims, grounds, arguments, and evidence as presented in the parallel proceeding.⁹

5. *Whether the petitioner and the defendant in the parallel proceeding are the same party*

The fifth factor favors denial because “the petitioner and the defendant in the parallel proceeding are the same party.” *Fintiv*, Slip. Op. 5–6, 13–14. Petitioner does not dispute that this factor favors denial, nor does Petitioner even mention in this factor in offering but two paragraphs (in total) purporting to address discretionary denial under *Fintiv*. See Pet. 66.

⁹ Petitioner opted to *not* submit with its Petition any stipulation according to *Sand Revolution II, LLC v. Continental Intermodal Group*, IPR2019-01393, Paper 24, at 11 (PTAB June 16, 2020).

6. *Other circumstances that impact the Board’s exercise of discretion, including the merits*

The sixth factor favors denial. *Fintiv* states, “if the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present.” *Fintiv*, Slip. Op. 15 (citations omitted). As discussed below, the Petition is deficient and institution would be an inefficient use of the Board’s resources. And as discussed above, the district court will begin a jury trial prior to an expected final written decision.

The sixth factor also considers “circumstances” other than the merits which may also “impact the Board’s exercise of discretion.” Slip. Op. 14 (citations omitted). As explained above, the reasons for denial under § 325(d) also weigh in favor of denial under the “other circumstances” relevant to *Fintiv* factor 6.

7. *Holistic assessment of the Fintiv factors*

As shown by the analysis above, *all six* of the *Fintiv* factors favor discretionary denial. Petitioner’s cursory, two-paragraph analysis of discretionary denial under *Fintiv* largely ignores the above factors and certainly does not present a persuasive case against exercising discretionary denial. *See* Pet. 66.

VI. GRYZHIN IS NOT PRIOR ART TO THE ’457 PATENT

Petitioner purports to challenge the priority claims of the ’457 patent, but only to assert a reference (Gryzhin) that is dated *after* the earliest alleged priority date. Pet. 4–6. In view of Petitioner’s curt priority challenge, a preliminary defense of the priority claim is provided herein. Because Gryzhin is woefully deficient on the merits, however, the Petition should be denied regardless of whether Gryzhin

qualifies as prior art. That Gryzhin does not so qualify provides an *additional* basis for denial.

The '457 patent claims priority to Provisional Application No. 61/737,200, filed on Dec. 14, 2012 (the “First Provisional”), and to Provisional Application No. 61/832,211, filed on Jun. 7, 2013 (the “Second Provisional”). Petitioner asserts Gryzhin has a filing date of March 19, 2012. Thus, the alleged date of Gryzhin is *after* the earliest filing date to which the '457 patent claims priority.

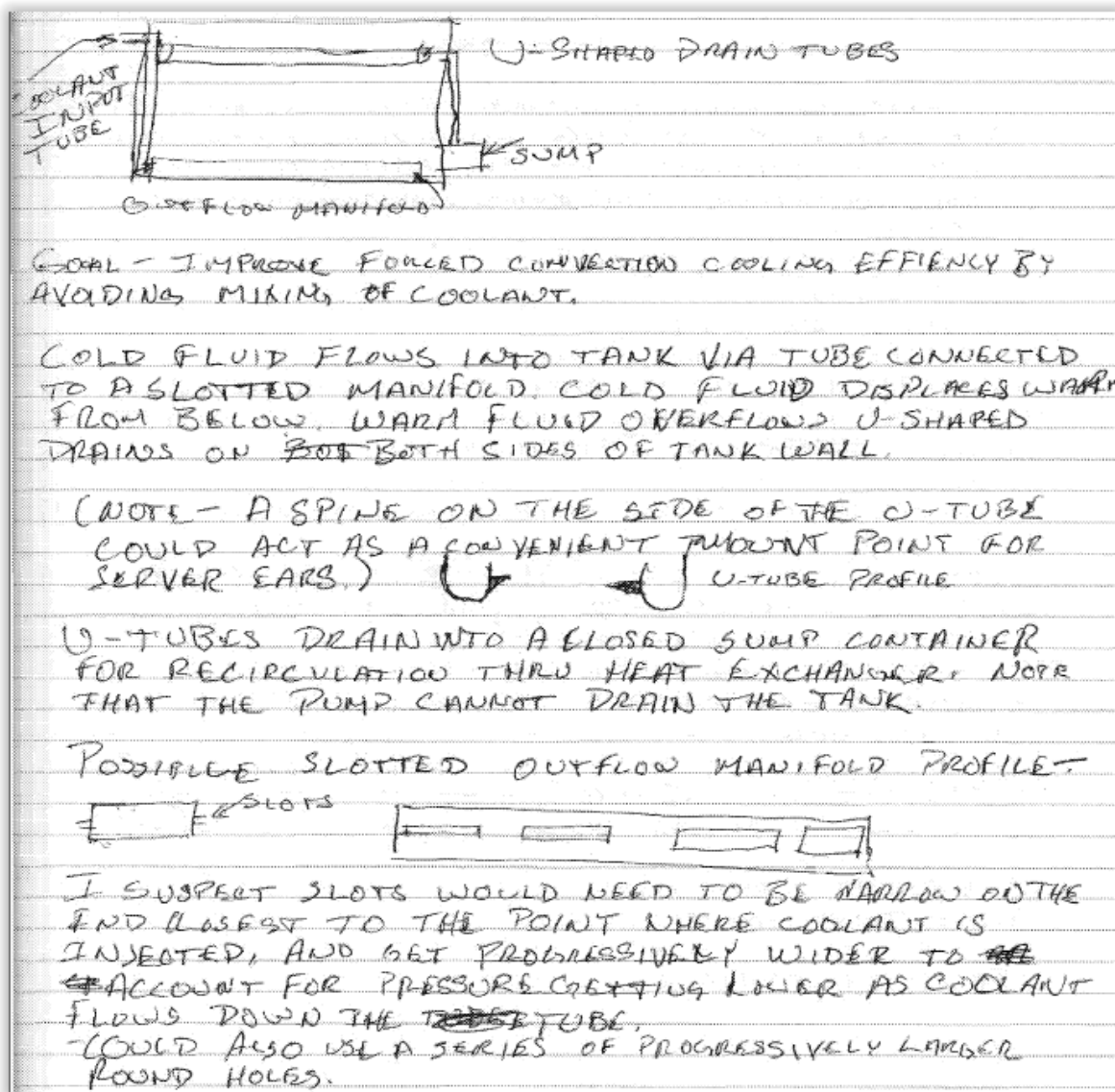
The Petition identifies only the following claim features as allegedly lacking § 112 support in the First Provisional: (1) what Petitioner ambiguously refers to as the so-called “location” of the weir (though the word “location” is not recited in the claims); (2) “dielectric fluid recover reservoir,” and (3) “a plenum ... adapted to dispense the dielectric fluid substantially uniformly upwardly through each appliance slot.” Pet. 4–5. Even if Petitioner has met its burden of production with its conclusory assertions, and it has not, there is sufficient § 112 support in the First Provisional for the features identified.

Petitioner fails to articulate precisely what *locational* aspect of the claimed “weir” is allegedly missing from the First Provisional. Such ambiguity is insufficient to shift the burden to MGT. Moreover, Petitioner acknowledges that “the First Provisional discloses a weir” in terms “open fluid return channel(s) (e.g., weirs) *extending horizontally along the long side(s) of the tank.*” Pet. 4. At least this example description provides sufficient § 112 support for the requirement

(recited in all challenged claims) that the “weir” must be “integrated horizontally into the long wall of the tank.”

A more fulsome quotation of the First Provisional provides, “[t]he Spray Bars are spaced such that a Server may be suspended in each inter-Spray Bar gap, thus forming respective ‘flow slots’ the flow patterns of which project upward from the Spray Heads, through the inter-Server gaps, and, ultimately into open fluid return channel(s) (e.g., weirs) extending horizontally along the long side(s) of the tank.” Ex. 2004, 1. Here, the First Provisional discloses that the weir(s) collectively extend along the long wall of the tank such that each is associated with a respective “flow slot” formed by the spacings between servers. This provides sufficient § 112 support for the additional requirement that the “weir” is “adjacent all appliance slots.”

Regarding the “dielectric fluid reservoir,” the First Provisional includes the following relevant descriptions:



Ex. 2004, 28. Here, the First Provisional describes an embodiment in terms of the structural interrelation and interaction of a *collection drain* (a type of “reservoir”) with a slotted outflow manifold profile integrated horizontally into the long wall of the tank (a type of “weir”). *Id.* This example disclosure provides sufficient § 112 support for the “dielectric fluid reservoir” limitation. In arguing the First Provisional lacks *any* support, Petitioner and its declarant ignore this relevant disclosure altogether.

Regarding the “plenum” element, Petitioner argues (through its declarant) that a POSITA would not understand the fan arrangement of Fig. 3 to show a “plenum” as claimed ostensibly because “[s]pray heads toward the ends of each spray bar will receive higher flow than the spray heads toward the middle of the spray bar, resulting in non-uniform dispersion of the liquid.” Pet. 5. Petitioner and its declarant ignore or misapprehend ample relevant disclosure in the First Provisional.

With reference to Fig. 2, for example, the First Provisional states, “orient the Spray Bar(s) longitudinally with Spray Head(s) aligned with inter-blade gaps.” Ex. 2004, 2. In other words, *each* inter-blade gap may have a respective Spray Head pointed (“longitudinally”) *directly at the gap*. *Id.* In addition, Fig. 3 is described as optionally pertaining to a fan arrangement where each spray head is directed at the *same* inter-blade gap, such that each gap is supplied by its own dedicated fan arrangement: “If more than one Spray Head *per gap*, arrange radially so as that the flow pattern resembles a fan, as in Fig. 3.” *Id.* (emphasis added). The First Provisional further teaches that “Spray Heads can be fixed flow rate or variable flow rate or a mixture of both as required for specific applications.” *Id.* This variable control of flow rate would allow for equalization notwithstanding varying angular displacement of a fan arrangement, for example. The above example disclosures collectively establish sufficient § 112 support for “a plenum ... adapted to dispense the dielectric fluid substantially uniformly upwardly through each appliance slot.”

Accordingly, there is sufficient § 112 support in the First Provisional for the each one of the three claimed features Petitioner references in its priority challenge.

VII. LEVEL OF ORDINARY SKILL IN THE ART

The Petition purports to define a person of ordinary skill in the art (“POSITA”) “as of December 13, 2013.” Pet. 10. The Petition does purport to offer any definition for POSITA if the ’457 patent is found to properly claim priority to either Provisional Application No. 61/737,200, filed on Dec. 14, 2012, or to Provisional Application No. 61/832,211, filed on Jun. 7, 2013. This ambiguity in the Petition is a fundamental flaw.

Setting aside the timing ambiguity in the Petition, Petitioner purports to define POSITA (at the wrong timeframe) as one who “would have had a either a (a) Bachelor’s degree in mechanical engineering, or an equivalent degree, with five years of liquid cooling systems experience including responsibility for designing such systems, or (b) Master’s Degree in mechanical engineering, or an equivalent degree, including liquid cooling systems research and system design.” *Id.* Even if Petitioner had asserted its definition also applied at the different timeframe of Dec. 14, 2012, and Petition did not, Petitioner would still not meet its burden to prove unpatentability of any challenged claim. Accordingly, MGT presently does not offer a competing definition for POSITA.

VIII. CLAIM CONSTRUCTION

The standard for claim construction applicable here is the “ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. §42.100(b) (effective November 13, 2018); 83 Fed. Reg. No. 197, 51340 (Oct. 11, 2018). This is the same

standard applied by Article III courts. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

A. Agreed constructions

In the parallel litigation, the parties reached agreement on the construction of certain claim terms of the '457 patent, as set forth in the table below. Ex-2003 at 7.

Claim Term (and where to be found)	Agreed Construction
“weir” (claims 1, 5, 6, 10, 11, 14)	an overflow structure or barrier that determines the level of liquid
“plenum” (claims 1, 5, 6, 10, 11, 14)	a structure for dispensing liquid

While the parties reached agreement concerning the above terms, the Board need not adopt any particular construction of these terms for purposes of rendering a decision on institution. Regardless of the construction applied to the above two terms, if any, the Petition is deficient at least as to the *surrounding context* in the claim language, which expressly qualifies each term.

B. Disputed construction – Petitioner errs in not giving any patentable weight to affirmative limitations

Petitioner errs in advancing invalidity theories which admittedly do not give any patentable weight to the affirmative limitation recited as “... adapted to facilitate substantial uniform recovery.” According to Petitioner, “POSITA [sic] would either lack certainty as to what this limitation indicates, or would not understand it to impart any structural limitations.” Pet. 15. Notably, Petitioner cited no purported expert testimony in support of its undefended claim interpretation. *Id.*

The proper construction of “adapted to facilitate substantial uniform recovery” was the sole dispute addressed by the parties in their respective opening claim construction briefs in the parallel litigation. *See generally* Ex-2003. MGT explained why this claim language is meaningfully limiting. MGT’s reasoning included the following:

The weir of the claims is integrated horizontally into the long wall of the tank, adjacent all appliance slots. The plenum, positioned adjacent the bottom of the tank, dispenses the dielectric fluid substantially uniformly upwardly through each appliance slot. And in order to come within the scope of the claims, the weir must achieve “substantially uniform recovery of the dielectric fluid flowing through each appliance slot.” According to the claims themselves, if a weir may be configured or designed in way that does not achieve the requisite uniformity of fluid flow through all of the appliance slots, then the weir is NOT adapted to facilitate substantially uniform recovery of the dielectric fluid.

Ex-2003 at 16.

In addition, MGT’s briefing pointed the District Court to example descriptions within the ’457 patent explaining how the weir and its overflow lip are adapted to facilitate substantially uniform recover of dielectric fluid. *Id.* at 17. One such description included the following:

[C]ooled dielectric fluid is pumped into both ends of the plenum facility In general, the plenum plate comprises at least one row of orifices vertically aligned with each appliance slot, with the dimensions and flow rates of each set being adapted to

provide substantially equal flow of the dielectric fluid upwardly into each appliance slot. Preferably, each appliance slot is supplied via several rows of orifices, thus generally tending to reduce the volume of the dielectric fluid exiting each orifice and to make the flow of dielectric fluid more uniform upwardly through the appliance slots.

Id. (quoting '457 patent, 4:15–32). Citing supporting declaration testimony of Dr. Maurice J. Marongiu, MGT further discussed this claim language as follows:

An ordinarily skilled artisan could determine how the weir has been adapted to facilitate such recovery of the dielectric fluid from the intrinsic evidence. Specifically, a person of ordinary skill (i.e., a “POSITA”) would understand that the plenum has been extended transverse to a long wall of the tank in order to dispense, in a substantially equal manner, the dielectric fluid upward through the each of the appliance slots of the tank, and the “weir” likewise has been extended to substantially the entire length of the tank, adjacent all of the appliance slots, in order to facilitate substantially uniform recovery of the dielectric fluid as it flows through each appliance slot across the length of the tank. If the “weir” were not so extended, substantially uniform recovery of the dielectric fluid would not be achieved. A POSITA would understand from the intrinsic evidence that the “plenum” has been adapted to push the dielectric fluid upward and the “weir”, in turn, has been adapted to allow substantially uniform recovery of that fluid through each appliance slot extending the length of the tank. A POSITA would understand that if the weir is configured or shaped in way that fails to achieve substantially uniform recovery of the dielectric fluid through each of the appliance slots, then a POSITA would understand

that such weir is not adapted to facilitate as required by the claims.

Id. 18–19.

While Petitioner recognized the parties’ dispute over this claim language, Petitioner opted to not even attempt to defend the claim interpretation applied in the Petition—i.e., that the phrase “adapted to facilitate substantially uniform recovery” does not “impart any structural limitations.” Pet. 15. It is well established that Petitioner cannot prove obviousness through application of an erroneous construction. *See Mentor Graphics Corp., v. Synopsys, Inc.*, IPR2014-00287, 2015 WL 3637569, (Paper 31) at *11 (P.T.A.B. June 11, 2015), *aff’d sub nom. Synopsys, Inc. v. Mentor Graphics Corp.*, 669 Fed. Appx. 569 (Fed. Cir. 2016) (rejecting invalidity theory as being tainted by reliance on an incorrect claim construction). As will be shown, Petitioner’s erroneous claim construction taints the entirety of its Petition and provides an independent basis for denial.

IX. NO REASONABLE LIKELIHOOD OF UNPATENTABILITY

“Petitioner has the burden of proof to establish entitlement to relief. 37 C.F.R. § 42.108(c) (“review shall not be instituted for a ground of unpatentability unless ... there is a reasonable likelihood that at least one of the claims challenged ... is unpatentable”). The Petition should be denied as failing to meet this burden. The Petition fails to meet this burden in presenting the following six redundant grounds. Each ground is based primarily or exclusively on Best—a reference scrutinized by the examiner during prosecution and ultimately found to not be invalidating.

Ground ¹⁰	References	Challenged Claims
1[a]	35 U.S.C. § 103(a) over Best ¹¹ in view of Krajewski ¹²	Claims 1, 5, 6, 10, 11, and 14
1[b]	35 U.S.C. § 103(a) over Best in view of Cray ¹³	Claims 1, 5, 6, 10, 11, and 14
1[c]	35 U.S.C. § 103(a) over Best in view of Krajewski and Cray	Claims 1, 5, 6, 10, 11, and 14
2	35 U.S.C. § 103(a) over Best in view of Oktay ¹⁴	Claims 1, 5, 6, 10, 11, and 14
3	35 U.S.C. § 103(a) over Best in view of Gryzhin ¹⁵	Claims 1, 5, 6, 10, 11, and 14
4	35 U.S.C. § 103(a) over Best	11, 14

A. The Petition fails to establish a reasonable likelihood that Best alone renders obvious claims 11 and 14 (Ground 4)

As explained above, Ground 4 of the Petition should be denied under § 325(d) as asking the Board to reconsider patentability based solely on the same Best reference addressed by the Examiner in *every* office action that issued during prosecution. *See* § IV, *supra*. As such, the Board need not reach the substantive merits of Ground 4. Nevertheless, a substantive analysis is presented herein because

¹⁰ While the Petition numbers its Grounds as 1 through 4, Ground 1 purports to assert Best in combination with “Krajewski and/or Cray.” Pet. 2 (emphasis added). The table here breaks the “and/or” conjunction into its three constituent parts. In effect, the Petition purports to advance six redundant grounds.

¹¹ Ex-1006, U.S. Patent No. 10,123,463 to Best et. al. (“Best”).

¹² Ex-1007, U.S. Patent No. 5,167,511 to Krajewski et. al. (“Krajewski”).

¹³ Ex-1008, U.S. Patent No. 4,590,538 to Cray, Jr. (“Cray”).

¹⁴ Ex-1009, U.S. Patent No. 3,406,244 to Oktay (“Oktay”).

¹⁵ Ex-1011, Russian Federation Patent No. 2500013C1 to Gryzhin (purported “English Translated Version”) (“Gryzhin”).

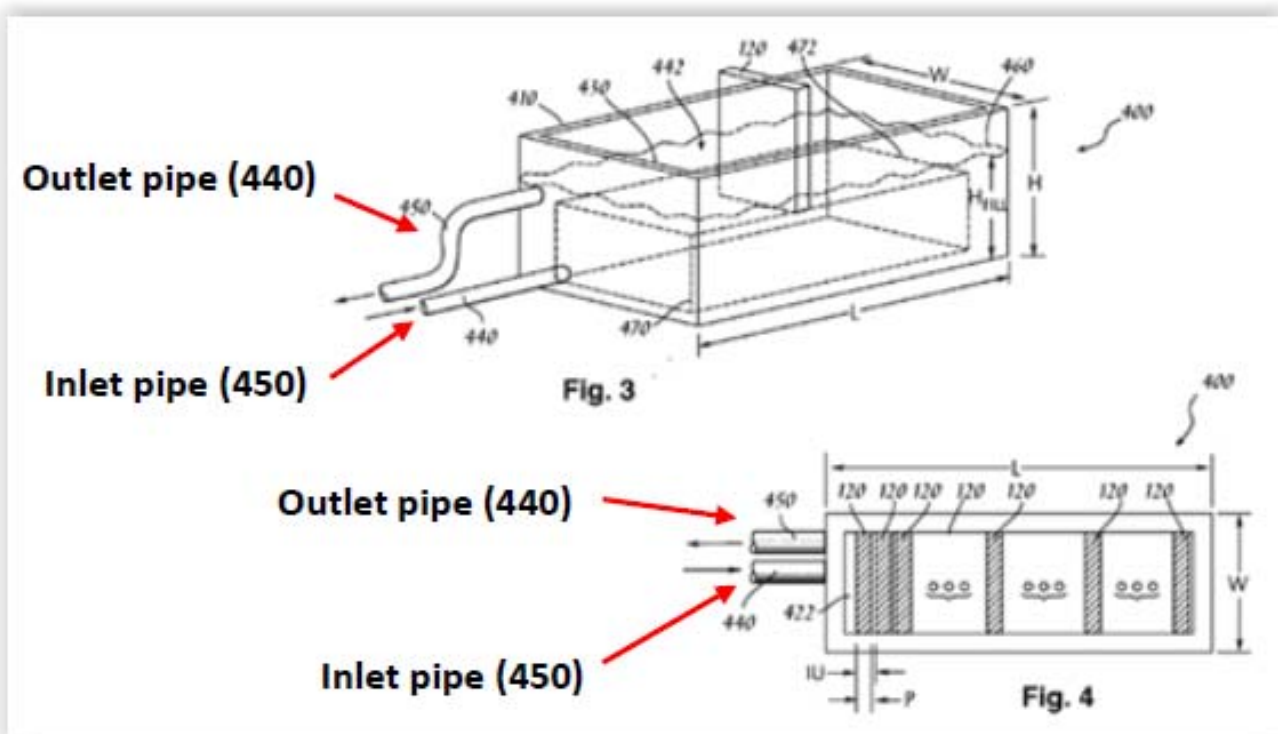
the Board has held that “weakness on the merits” or even a “closer call” weigh in favor of discretionary denial under § 314(a), particularly where other factors supporting denial are present. *Fintiv*, Slip. Op. 15.

As explained above, the intrinsic evidence speaks for itself in refuting Petitioner’s assertion (under Ground 4) that Best alone renders obvious claims 11 and 14. *See* § II, *supra*. The ’457 patent specification expressly differentiates the Best reference, at least in part, as lacking a weir (22) that is integrated into a long wall of the tank (14) and that is adapted to facilitate substantially uniform recovery of the dielectric fluid through each appliance. *Id.*

Consistent with the patent specification, the Examiner concluded during prosecution that, at a minimum, “Best does not teach the weir and reservoir arrangement” of claim 11. Ex-1002, 45. The Board should take judicial notice of Petitioner’s statement that its “*Petition accepts the conclusions reached by the Examiner in all respects of his analysis of Best.*” Pet. 10 (emphasis by Petitioner). Taking Petitioner at its word, the Board need not and should not reconsider the Examiner’s conclusion that Best is deficient at least as to “the weir and reservoir arrangement” recited in claim 11. Ex-1002, 45; *see also* § IV, *supra*.

While the myriad of threshold issues identified herein make it unnecessary for the Board to reach the substantive merits of Ground 4 (based on Best alone), even a cursory review of the Best reference reveals clear distinctions over claims 11 and 14. Figures 3 and 4 of Best (reproduced below) show “a suitable fixture or rack apparatus” that includes a “tub or tank 410,” “an inlet pipe or line 440 from a piping

system connected to a heat exchanger for the flow of lower temperature or cooled liquid coolant into the tank 410 and an outlet pipe or line 450.” Ex-1006, 14:22–47.



Ex-1006, Figs. 3 and 4 (annotations added by MGT).

Figures 3 and 4 of Best plainly reveal why the '457 patent identifies example problems with the distinguishable approach applied in Best. Ex-1001, 2:31–34. Unlike the claimed inventions of the '457 patent, Best is problematic at least in that it limits intake and outtake of dielectric fluid to single pipes that constrict flow and lead to uneven flow of the dielectric fluid through the tank. *Id.*

As noted above, the '457 patent itself expressly disparages and distinguishes the approach in Best as having inherent problems that are overcome by teachings of the '457 patent. *See* § II, *supra*. The specification of the '457 patent describes certain problems of Best as being manifest, in part, by (1) “generally non-uniform

flow patterns through the several appliance slots within the tank, potentially resulting in uneven cooling across all slots” (Ex-1001, 2:31-34) and (2) “constricted dielectric fluid supply and return ports resulting in unnecessarily high fluid flow velocities at the respective points of connection to the tank” (*id.*, 2:34-36).

Unlike the problematic approach in Best, the ’457 Patent’s specification describes example embodiments adapted to “make the flow of dielectric fluid more uniform upwardly through the appliance slots” (Ex-1001, 4:27–28) and “to facilitate substantially uniform recovery of the dielectric fluid flowing through each of the appliance slots” (*id.*, 3:56–58). A preferred embodiment achieves this advantageous improvement, at least in part, through use of a long, open weir (22) that is “integrated into the long rear wall of the tank” (*id.*, Fig. 5; 3:3–6) and that extends to substantially the entire length of the tank, adjacent all the appliance slots. The arrangement and configuration of the weir (22) taught in the ’457 patent bears no resemblance to constricting outlet pipe (450) in Best.

Claim 11 recites limitations which reflect certain patentable aspects of the weir (22) taught in the ’457 patent. For example, claim 11 recites “a weir 22, integrated horizontally into the long wall of the tank (10) adjacent all appliance slots (18), adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot (18).” Thus, claim 11 structurally defines the “weir” (in part) as being “adjacent all slots (18).” The “slots” are themselves structurally defined (in part) as being distributed vertically along, and extending transverse to, a long wall of the tank (10). Given the amount of structural detail

recited in claim 11, and further given the express differentiation of Best set forth in the '457 patent itself, it is no wonder that the *seven* named inventors *and* the Examiner all found claim 11 to be patentable over Best.

Keeping in mind that the burden lies with Petitioner, Petitioner fails to persuasively defend its single-reference obviousness theory (under Ground 4) based on Best alone. Neither the Petition nor its attached declaration even attempts to provide a showing of a suggestion or motivation to modify the teachings of Best to arrive at the structural limitations of claim 11 directed to the weir (22). *See SIBIA Neurosciences, Inc. v. Cadus Pharmaceutical Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000) (“In appropriate circumstances, a single prior art reference can render a claim obvious. However, there must be a showing of a suggestion or motivation to modify the teachings of that reference.”); *see also Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016) (“Though less common, in appropriate circumstances, a patent can be obvious in light of a single prior art reference *if it would have been obvious to modify that reference to arrive at the patented invention.*”) (emphasis added) (citations omitted). Indeed, in presenting Ground 4, the Petition fails to explain why Best is asserted alone under a theory of *obviousness*, as opposed to a theory of *anticipation*.

In dedicating little more than a page to Ground 4, Petitioner offers the *ipse dixit* statement that “[b]ecause a POSITA would have understood the limitations of Claim 1 to be expressly disclosed, taught, or suggested by Best, in turn, a POSITA would also have found Claim 11 to be obvious in light of Best.” Pet. 63. Had

Petitioner truly believed its own conclusory statement, Petitioner would have also challenged claim 1 under Ground 4 as being rendered obvious by Best alone. *Id.*, 2 (defining Ground 4 as challenging *only* claims 11 and 14). That Petitioner opted not to do reveals Petitioner does not truly stand by its flawed *and undefended* conclusion.

Compounding its error, Petitioner also argues that “the examiner, for unknown reasons, failed to address that newly added Claims 11–16 were anticipated by Best for failing to include Limitation 1[d].” Pet. 63. The Petitioner uses “Limitation 1[d]” as shorthand to refer to claim language recited in claim 1 as follows: “dielectric fluid recovery reservoir positioned vertically beneath the overflow lip of the weir and adapted to receive the dielectric fluid as it flows over the weir.” *See* Pet. 19. It is understood, therefore, that Ground 4 of the Petition is premised on the demonstrably false and undefended positions that (1) the Examiner allowed claim 1 due solely to the limitation referred to in the Petition as “Limitation 1[d]” and (2) that the Examiner erred in failing to recognize the same limitation is not recited in claim 11.

Petitioner overlooks that the Examiner correctly found claim 11 to be allowable over Best due, at least in part, to limitations directed to the claimed “weir” itself. Ex-1002, 45. This includes, for example, the structural requirements that the claimed “weir” must be “integrated horizontally into the long wall of the tank (10) adjacent all appliance slots (18)” and “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot (18).” By expressly finding Best deficient at least as to the “weir” requirements recited in claim

11, the Examiner conclusively refuted Petitioner’s speculative and irrational notion that “Limitation 1[d]” was the *only* claim language of the ’457 patent that the Examiner deemed patentable over Best. Ex-1002, 45.

If the Board even reaches the substantive merits of Ground 4, then the foregoing reasons provide ample basis to deny the Petition as failing to establish a reasonable likelihood that Best alone renders obvious claim 11. Because claim 14 depends from claim 11, claim 14 likewise has not been shown to be unpatentable over Best. Indeed, the weakness of the Petition in raising Ground 4 weighs in favor of discretionary denial. *See* §§ IV–V, *supra*. Accordingly, in addition to the threshold issues warranting discretionary denial, the Petition should also be denied as being woefully deficient on the substantive merits.

B. The Petition fails to establish a reasonable likelihood that Best in view of Krajewski and/or Cray renders obvious the claimed weir and reservoir arrangement of claim 1 (Ground 1)

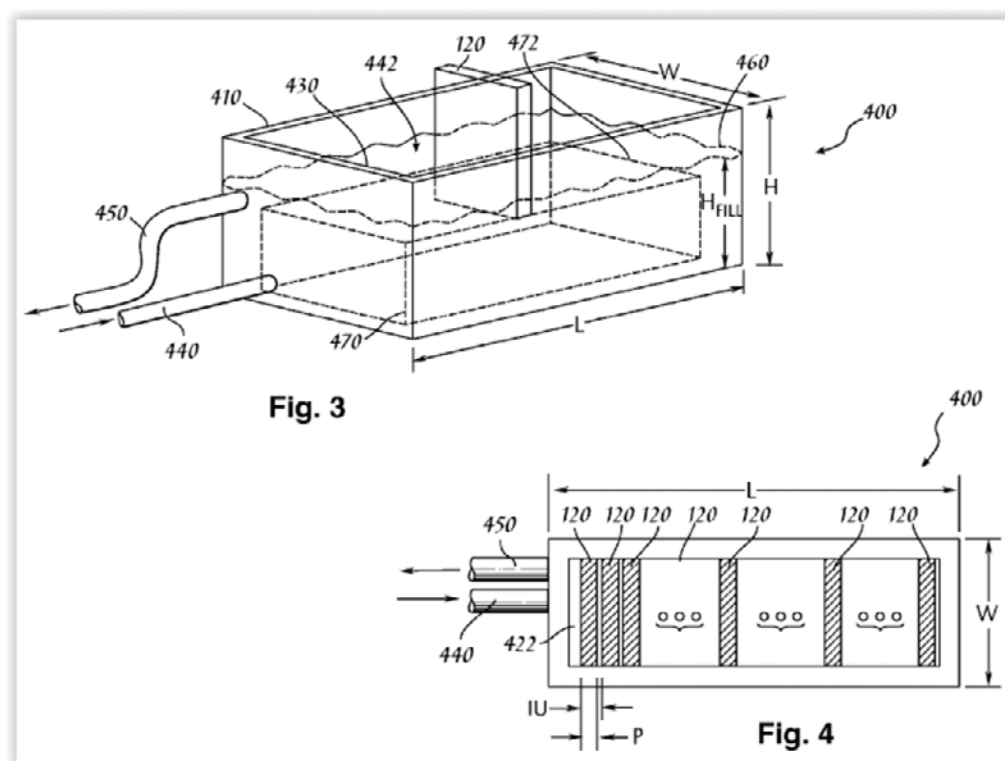
Ground 1 of the Petition should likewise be denied under § 325(d) as seeking reconsideration based solely on references that the Examiner considered during prosecution. *See* § IV, *supra*. Nevertheless, a substantive analysis is presented herein because the Board has held that “weakness on the merits” or even a “closer call” weigh in favor of discretionary denial under § 314(a), particularly where other factors supporting denial are present. *Fintiv*, Slip. Op. 15. As will be shown, the weakness of the Petition in raising Ground 1 strongly weighs in favor of discretionary denial here. *See* §§ IV–V, *supra*.

1. Best has not been shown to render obvious all limitations directed to the “weir”

Ground 1 of the Petition seeks to have the Board reconsider the same Best reference addressed by the Examiner in every office action that issued during prosecution. *See* § IV, *supra*. In addressing claim language that would ultimately issue as claim 1, the Examiner found that “Best does not teach the weir and reservoir arrangement.” Ex-1002, 43. The Board should take judicial notice of Petitioner’s statement that its “*Petition accepts the conclusions reached by the Examiner in all respects of his analysis of Best.*” Pet. 10 (emphasis by Petitioner). Taking Petitioner at its word, the Board need not and should not reconsider the Examiner’s conclusion that Best is deficient at least as to “the weir and reservoir arrangement” recited in claim 1. Ex-1002, 43.

Petitioner’s primary reliance on Best (under Ground 1) also overlooks claim limitations directed to the claimed “weir” itself. Ex-1002, 45. This includes, for example, the structural requirements that the claimed “weir” must be “integrated horizontally into the long wall of the tank adjacent all appliance slots” and must have “an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.”

Petitioner argues that Best illustrates in Figures 3 and 4 that “slots are distributed vertically along and extending traverse to the long wall.” Pet. 13. Those two cited figures of Best are reproduced below.



Ex-1005, Figs. 3 and 4. It is understood, therefore, that Petitioner alleges the “long wall” recited in claim 1 is shown in Best by the wall running parallel to the “L” arrow in Fig. 4—i.e., the wall along which the servers 120 are positioned. Petitioner further points to the “outlet pipe or line 450” of Best as allegedly satisfying the “weir” limitations. Pet. 14.

At a minimum, Petitioner’s primary assertion of Best fails to establish the explicit structural interrelationship between the claimed “slots” and “weir” elements, as recited in claim 1. As noted above, among other structural limitations, claim 1 requires the “weir” to be “integrated horizontally into the long wall of the tank adjacent all appliance slots.” This structural qualification of the “weir” clearly is not shown by the “outlet pipe or line 450” of Best that extends from a different wall and that is not adjacent to all the alleged appliance slots.

Evidently recognizing Best’s “outlet pipe or line 450” is deficient as to certain “weir” limitations, Petitioner points in the alternative to Best’s “output piping 650” of Fig. 9. Pet. 14. Without any accompanying explanation, Petitioner quotes Best as stating “the outlet piping 650 is located nearer the opposite end of the same longer side of the rectangular tank nearer the top of the tank.” *Id.* (quoting Ex-1006, 16:26–29).

Petitioner overlooks that Best distinguishes the location of the “outlet piping 650” from the “inlet piping 640” in that they are disposed at respective opposite *corners* of the tank and that both are expressly described as not being positioned at the “middle” of the tank where servers are nevertheless located. Ex-1006, 16:24–29. At a minimum, the Petition lacks any explanation for how the distinguishable alternative arrangement of Best’s “output piping 650” satisfies the requirement that the “weir” must be “integrated horizontally into the long wall of the tank adjacent all appliance slots,” as recited in claim 1.

Petitioner has not cured these example deficiencies of Best by retreating to the conclusory statement, “POSITA would inherently understand that the weir could be integrated with the wall adjacent the appliance slots.” Pet. 14. The Federal Circuit reiterated the standard for proving obviousness through inherency as follows:

“Inherency ... may not be established by probabilities or possibilities.” *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1195 (Fed. Cir. 2014). “The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *Id.* (emphasis added). Rather, a party must “show that *the natural result flowing* from the operation as taught would result in the performance of the questioned function.” *Id.* (emphasis in original).

Personal Web Technologies, LLC v. Apple, Inc., 917 F.3d 1376, 1382 (Fed. Cir. 2019); *see also Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1290 (Fed. Cir. 2006) (“legal determinations of obviousness, as with such determinations generally, should be based on evidence rather than on mere speculation or conjecture.”). Petitioner’s “could be” speculation falls far short of the exacting legal standard for inherency. Pet. 14 (citing Ex-1020, ¶187). Moreover, Petitioner’s conclusory “could be” speculation unaccountably omits the “horizontally into” and “all” qualifiers from the claim language in question.

Also absent from the Petition (and its attached declaration) is any explanation as to precisely *how* the outlet piping in Best allegedly “could be” *modified* to arrive at the precise claim language, much less any explanation and evidentiary support for any *motivation* to do so. The Federal Circuit rejected a similar argument that obviousness was shown merely because an asserted reference allegedly *could have* been modified. *In re Omeprazole Patent Litigation*, 536 F.3d 1361, 1380 (Fed. Cir. 2008). There, like here, there was insufficient motivation to modify as proposed because the flaw identified *in the challenged patent* had not been recognized *in the asserted art* that would require modification. *Id.*

The above example patentable distinctions of claim 1 over Best apply are also fatal to the challenge of independent claims 6 and 11 under Ground 1. This is because claim 6 recites the same “weir” limitations verbatim—i.e., “a weir, integrated horizontally into the long wall of the tank adjacent all appliance slots.” Claim 11 similarly recites “a weir 22, integrated horizontally into the long wall of the tank

(10) adjacent all appliance slots (18).” Thus, Petitioner’s primary reliance on Best (under Ground 1) is deficient as to all three challenged independent claims (and hence all claims challenged in the Petition).

As an additional and independent basis for denial on the merits, Petitioner’s primary reliance on Best fails to establish the additional structural requirement that the “weir” of claim 1 must have “an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.” Independent claim 6 recites the same structural requirement for the “weir” (verbatim). Claim 11 similarly recites that the “weir” itself must be “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot (18).”

As explained above, the ’457 patent specification expressly distinguishes and disparages Best as having certain “problems” that are overcome by certain claimed teachings of the ’457 patent. *See, e.g.*, §§ II, IX.A, *supra*. Among other identified problems, the ’457 patent observes that Best has (1) “generally non-uniform flow patterns through the several appliance slots within the tank, potentially resulting in uneven cooling across all slots” (Ex-1001, 2:31–34); and (2) “constricted dielectric fluid supply and return ports resulting in unnecessarily high fluid flow velocities at the respective points of connection to the tank” (*id.*, 2:34–36).

Thus, the *seven* named inventors all clearly considered Best to at least lack a “weir” that is “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot” (as recited in all challenged claims). *Id.*

The Examiner ultimately agreed, as demonstrated *both* by his repeated statements that “Best does not teach the weir and reservoir arrangement” (Ex-1002, 43, 45) *and* by his unsuccessful yet diligent attempt to search for these limitations in other references. The record simply lacks sufficient rebuttal evidence, or any rational justification, for the Board to second guess the well-founded observations set forth in the ’457 patent, which are corroborated by the Examiner’s explicit findings of record.

For a myriad of reasons, therefore, the Board should also deny the Petition on the merits as failing to establish the Examiner erred in concluding “Best does not teach the weir and reservoir arrangement” (Ex-1002, 43, 45), as set forth in respective limitations of the challenged claims.

2. Krajewski has not been shown to render obvious all limitations directed to the “weir”

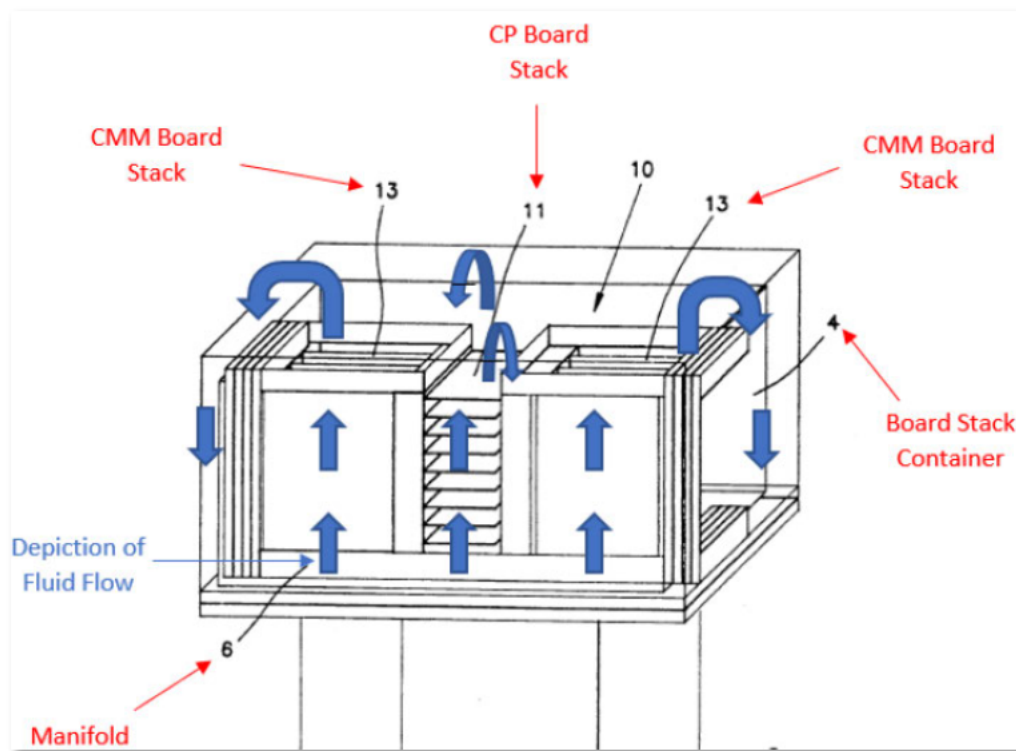
Evidently recognizing Best is deficient as to at least the “weir” element, Ground 1 of the Petitioner purports to rely on Krajewski *in the alternative*. Pet. 16. As noted above, Krajewski is yet another reference identified on the face of the ’457 patent as having been “cited” by and hence considered by the Examiner during prosecution and found to not be invalidating. *See* § IV, *supra*.

To be clear, in addressing what Petitioner refers to as “Limitation 1[c],” the Petition does not expressly propose to *modify* Best based on alleged teachings of Krajewski, much less specify what such a modification would entail, how it would be performed without rendering Best inoperable for its intended purpose, or why there would have been sufficient motivation to modify in an unspecified manner.

Rather, the Petition simply advances Krajewski in the alternative as follows: “[i]n addition to Best, Krajewski also teaches Limitation 1[c].” Pet. 16. Petitioner fails to explain why the Board should now second guess the Examiner’s finding of patentability over Krajewski. *Id.*

In purporting to rely in Krajewski in the alternative, Petitioner (yet again) either overlooks or misapprehends claim limitations directed to the “weir” itself. As recited in independent claims 1 and 6, this includes, for example, the structural requirements that the claimed “weir” must be “integrated horizontally into the long wall of the tank adjacent all appliance slots” and must have “an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.” Similarly, as recited in independent claim 11, this includes, for example, the structural requirements that the claimed “weir” must be “integrated horizontally into the long wall of the tank (10) adjacent all appliance slots (18), adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot (18).”

Petitioner summarizes its alternative assertion of Krajewski (for certain “weir” limitations) by providing colored annotations on top of Krajewski’s Figure 1, as reproduced below:



Pet. 17 (reproducing Fig. 1 of Krajewski, with colored annotations by Petitioner). At most, Petitioner tacitly asserts (through its *unelaborated* color annotations) that fluid flows on the left-hand side of Krajewski's Fig. 1 system through a space between two separate and opposing walls and, separately, on the right-hand side through a similar space between two separate and opposing walls. *Id.*

Petitioner's mischaracterization of Krajewski overlooks, for example, that Krajewski states the fluid flows "through the CP board stack 11 *from the rear to the front.*" Ex-1007, 4:64–65 (emphasis added). Contrary to what Krajewski discloses, Petitioner's blue annotations sketches fluid flow from bottom to top through the CP Board stack 11. Pet. 17. The '457 patent underscores the distinction arising from Krajewski's vertical-stack (11) as follows: "one particular problem in the vertical-stack-type systems disclosed in the above references is the necessity of draining the

cooling fluid whenever physical access to the electronic modules was required.” *Id.*, 1:62-65.

Even if one were to ignore the vertical-stack problem of Krajewski, expressly raised in the ’457 patent itself, this still would not establish a “weir” that is “*horizontally integrated into the long wall of the tank.*” Nor do Petitioner’s annotations show any *horizontally integrated weir* that is “adjacent all appliance slots.” The Petition further lacks any rational explanation for how allegedly directing fluid through a space *between* opposing *weir-less* walls on one side of a tank, and through another space *between other* opposing *weir-less* walls on an *opposite* side of a tank, could possibly render obvious the plainly distinguishable structural requirements for the “weir.”

Petitioner’s alternative reliance on Krajewski also fails to establish the additional requirement that the “weir” must be “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.” Petitioner argues Krajewski renders obvious these “adapted to” requirements by showing a “weir” that allegedly “is integrated horizontally into the entire ‘inner wall 7 of the board stack container.’” Pet. 17. But, as explained above, Krajewski has not been shown to have a “weir” that is “*integrated ... into the long wall of the tank.*” Accordingly, Petitioner’s only expressed theory for the “adapted to” requirements should likewise be rejected as baseless.

For a myriad of reasons, therefore, the Board should also deny the Petition on the merits as failing to establish the Examiner erred in concluding Krajewski

(whether considered alone or in combination with either Best or Cray) does not render obvious certain “weir” limitations recited in all the challenged claims.

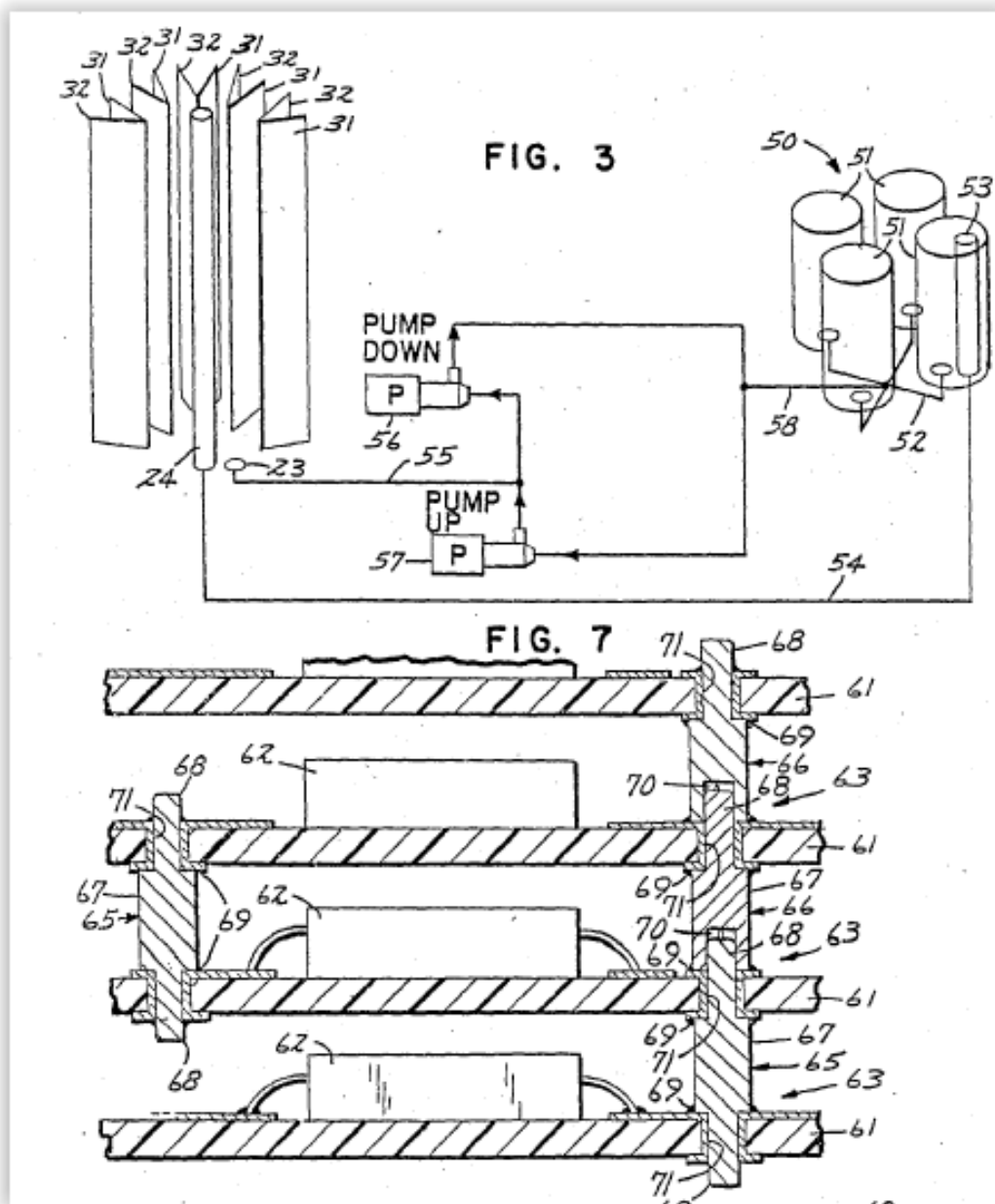
3. Cray has not been shown to render obvious all limitations directed to the “weir”

As a tacit acknowledgment of the weakness of *both* Best *and* Krajewski, Ground 1 of the Petition also purports to offer Cray *in the alternative* to both Best and Krajewski. Pet. 16. As noted above, Cray is yet another reference identified on the face of the ’457 patent as having been “cited” by and hence considered by the Examiner during prosecution and found to not be invalidating. *See* § IV, *supra*.

To be clear, in addressing what Petitioner refers to as “Limitation 1[c],” the Petition does not expressly propose to *modify* either Best or Krajewski based on alleged teachings of Cray, much less specify what such a modification would entail, how it would be performed without rendering Best or Krajewski inoperable for their respective intended purposes, or why there would have been sufficient motivation to modify either or both references in an unspecified manner. Rather, the Petition simply advances Cray in the alternative as follows: “[s]imilar to Best and Krajewski, Cray also teaches Limitation 1[c].” Pet. 17. The Petition fails to explain why the Board should now second guess the Examiner’s finding of patentability over Cray. *Id.*

In purporting to rely on Cray in the alternative, Petitioner overlooks that the ’457 patent expressly disparages the Cray approach as lacking the claimed structural arrangement. A key distinction manifests itself, for example, through Cray’s use of a *vertical-stack* arrangement similar to what is applied in Krajewski. *See* §§ IV,

IX.B.2 (both addressing Ex-1001, 1:33–2:22), *supra*. As explained above, the '457 patent expressly disparages such an approach as having certain inherent problems. *Id.* The *vertical-stack* approach in Cray is shown, for example, in Figs. 3 and 7 (reproduced below) and the accompanying descriptions.



Ex-1008, Figs. 3, 7.

Petitioner's assertion of Cray also either overlooks or misapprehends claim limitations directed to the "weir" itself. As recited in independent claims 1 and 6, this includes, for example, the structural requirements that the claimed "weir" must be "integrated horizontally into the long wall of the tank adjacent all appliance slots" and must have "an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot." Similarly, as recited in independent claim 11, this includes, for example, the structural requirements that the claimed "weir" must be "integrated horizontally into the long wall of the tank (10) adjacent all appliance slots (18), adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot (18)."

The Petition also overlooks certain relational requirements in its reliance on Cray. For example, in addressing a feature of the "weir" identified as an "overflow lip," claims 1 and 6 express a relative positional requirement as follows: "a recovery reservoir *positioned vertically beneath the overflow lip* of the weir and adapted to receive the dielectric fluid as it flows over the weir."

This arrangement in claims 1 and 6 reflects certain descriptive aspects of a preferred embodiment. For example, the '457 patent states "[o]ne further shared component is the dielectric fluid recovery facility 40 (FIG. 2) comprising a dielectric fluid recovery reservoir 42 (see, FIG. 3, FIG. 4 and FIG. 13) positioned vertically beneath the ***overflow lip*** of the weir 22 and adapted smoothly to receive the dielectric fluid as it flows over the weir 22" Ex-1001, 4:27–32 (emphasis added). In the preferred embodiment, therefore, the recovery reservoir is positioned *beneath* the

“overflow lip” to capture fluid as it *flows over the lip and downward* into the collecting reservoir. *Id.*

The claimed arrangement of the “weir” has not been shown to be either expressly or inherently disclosed in Cray. Petitioner argues the claimed “weir” is shown by Cray’s “vertically oriented planar shaped structure[s] perforated with a large number of holes to permit the coolant to flow through them.” Pet. 18 (misquoting Ex-1008, 5:10–14).¹⁶ But Cray does not describe any of its perforation holes as having a “weir” structure over which the fluid flows *over* and *downward* into a collection reservoir. On the contrary, Cray describes heated fluid as flowing through the perforation holes and then “upward” until the fluid spills “over the tops of the stand-pipes 35 down through them for recirculation through the heat exchanger.” Ex-1008, 6:36–41; *see also id.* 2:49–52 (“In a preferred form, standpipes are placed in the alternate coolant flow columns for removal of coolant, after it passes through the stacks and rises upwardly along the standpipe then over the top.”). Thus, in Cray, the structure over which the heated fluid spills over is separate and distinct from the planar structure having the perforations. Petitioner cannot persuasively resort to *inherency* where Cray makes *explicit* certain structural distinctions.

As an additional basis for denial on the merits, Petitioner’s assertion of Cray overlooks that all challenged independent claims 1, 6, 11 recite a generally

¹⁶ Petitioner misquotes Cray as referring to “structure” *in the singular*, where Cray refers to “structures” *in the plural*.

orthogonal relationship between the orientation of the claimed “weir” relative to the orientation of the claimed “slots.” Each independent claim 1, 6, and 11 (and hence all challenged claims) structurally defines each “appliance slot” as being “distributed *vertically* along, and extending transverse to, a long wall of the tank.” The claims all further require that the “weir” must be “integrated *horizontally* into the long wall of the tank” in a manner that is “adjacent all appliance slots.” Petitioner fails to explain how Cray renders obvious this explicit arrangement, including the differentiation of the “appliance slots” and “weir” as being vertically and horizontally arranged, respectively, relative to “the long wall of the tank.”

Petitioner could not do so at least because Cray defines the support frames (31,32) having perforations therethrough as being “vertically oriented.” *Id.*, 5:11–12. Cray further describes its so-called “stacks” as an arrangement of *horizontally* aligned shelves that are *stacked* on top of one another, as opposed to the claimed vertical arrangement relative to a long wall of a tank. Indeed, Cray expressly defines what it considers to be vertical and horizontal with reference to Figure 1; and then Cray describes each “stack” as being parallel to the horizontal. Ex-1008, 4:1–4; 5:1–2. As explained above, the ’457 patent expressly distinguishes at least this “vertical-stack” aspect of Cray as having inherent problems. *See* §§ IV, IX.B.2 (both addressing Ex-1001, 1:33–2:22), *supra*.

Ignoring these plain distinctions, Petitioner offers no rational basis to conclude that Cray describes any of its perforations in the “vertically oriented” support frames (31,32) as being either “integrated horizontally into the long wall of

the tank” or as being “adjacent all appliance slots,” as required by all challenge claims. Rather, all Petitioner offers is *ipse dixit* statements that repeat the claim language. Pet. 19. This too fails to meet the threshold evidentiary burden necessary for institution and hence provides an additional basis for denial on the merits.

C. The Petition fails to establish a reasonable likelihood that Best in view of Oktay renders obvious the claimed weir and reservoir arrangement of claim 1 (Ground 2)

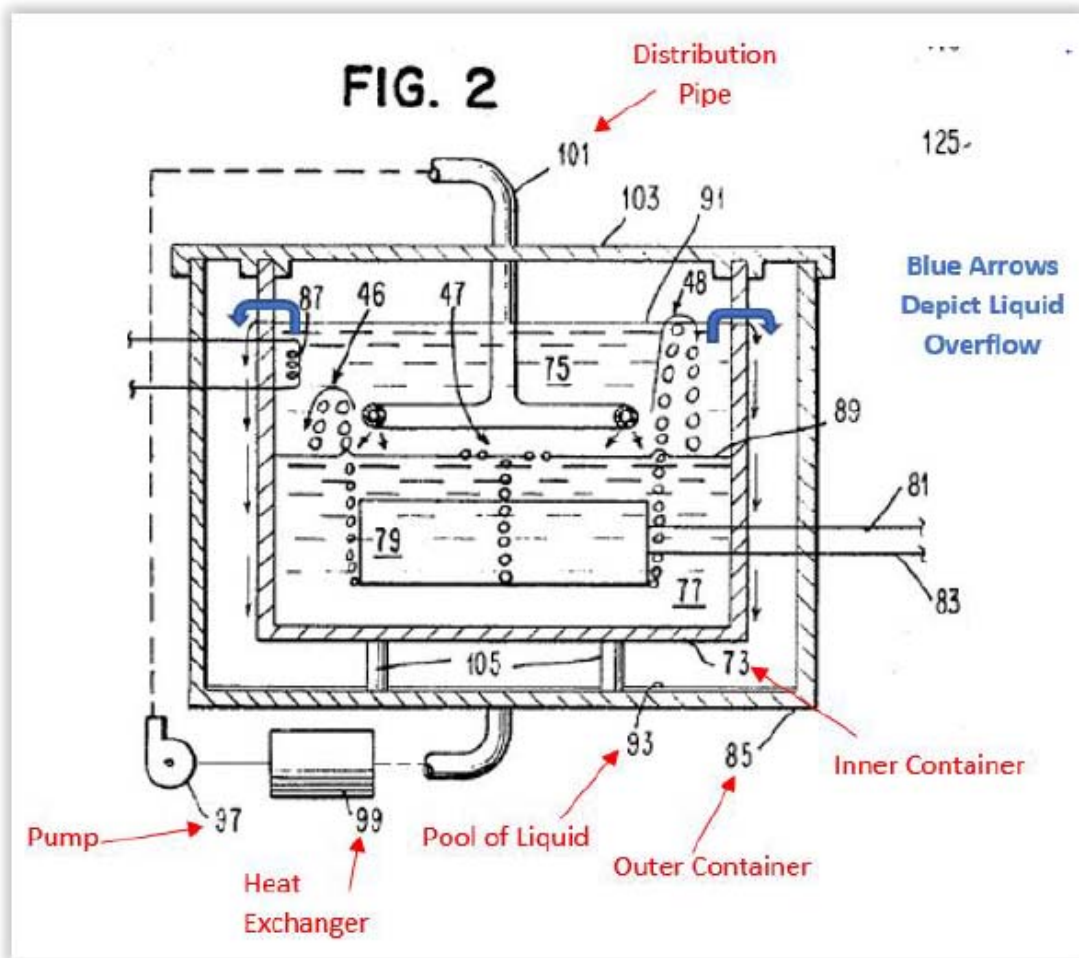
Among other substantive deficiencies, Ground 2 of the Petition fails to establish a reasonable likelihood that Best in view of Oktay renders obvious the claimed weir and reservoir arrangement recited in the challenged claims. In addressing what Petitioner refers to as “Limitation 1[c],” Ground 2 of the Petition first cites to the assertion of Best in Ground 1. Pet. 39. Petitioner’s redundant assertion of Best under Ground 2 is deficient for the myriad of reasons addressed above. *See* §§ II, IX.A, IX.B.1, *supra*.

The Petition asserts Oktay in the alternative to Best as follows: “Oktay *also* discloses Limitation 1[c].” Pet. 39 (emphasis added). In purporting to address “Limitation 1[c]” under Ground 2, Petitioner does not expressly propose to *modify* Best by Oktay, much less specify what such a modification would entail, how it would be performed without rendering Best inoperable for its intended purpose, or why there would have been sufficient motivation to modify Best in an unspecified manner. Pet. 39–40. Rather, Petitioner merely asserts Oktay in the alternative, without explaining the alleged basis or justification for such redundancy.

Even if one were to set aside the ambiguity of Petitioner’s alleged combination of Best and Oktay, Petitioner’s alternative assertion of Oktay overlooks explicit claim requirements directed to the “weir.” For example, Petitioner fails to establish Oktay renders obvious a “weir” that is (1) *horizontally* integrated into the long wall in a manner that is (2) adjacent all *vertically* arranged appliance slots, and that is further (3) “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.” These example deficiencies are fatal as to all challenges raised under Ground 2 of the Petition. Each shall be addressed in turn.

First, Petitioner overlooks the explicit recited arrangement of the “weir” relative to *all* the “appliance slots.” Independent claims 1 and 6 recite this relative structural interrelationship as follows: “a weir, integrated horizontally into the long wall of the tank *adjacent all appliance slots*.” Independent claim 11 similarly recites a weir 22, integrated horizontally into the long wall of the tank (10) *adjacent all appliance slots (18)*.”

Petitioner purports to illustrate its alternative reliance on Oktay by providing colored annotations to Oktay’s Fig. 2, as reproduced below:



Pet. 40 (colored annotations by Petitioner to Ex-1009, Fig. 2). Notably absent from Petitioner’s colored annotations is any identification of the alleged “appliance slots” in Fig. 2 of Oktay. Evidently Petitioner realized that Oktay fails to disclose *any* “appliance slots” that are arranged “adjacent” to the location where Petitioner indicates (using thick blue arrow annotations) the fluid allegedly flows into the inner container 73.

Second, Petitioner also fails to explain how Oktay renders obvious the additional structural requirements that all the “slots” and the *adjacent* “weir” must

be arranged “*vertically*” and “*horizontally*,” respectively, relative to “the long wall of the tank.”

Finally, Petitioner not only tacitly concedes (by omission) that Oktay illustrates a significant displacement between where fluid flows through inner container 73 and heat generating device 79, Petitioner also fails to explain how this separation nevertheless allows the alleged “weir” to be “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot,” as recited in all challenged claims. In purporting to address this “substantially uniform” requirement, Petitioner quotes the following statement in Oktay: “[w]ith the overflow arrangement, the heat transfer rate of the entire system is increased and a more efficient system results.” Pet. 40 (quoting Ex-1009, 3:69–4:1). That an overflow arrangement allegedly increases heat transfer does not establish obviousness of the distinct requirement “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot,” as recited in all challenged claims. In other words, Petitioner has not and cannot prove obviousness by purporting to address something other than what the claim language expressly requires.

For a myriad of reasons, therefore, Oktay does not cure the deficiencies of Best (including at least those deficiencies of Best that the Examiner had identified during prosecution). In view of the example substantive deficiencies identified herein, Ground 2 of the Petition should be denied in its entirety. Furthermore, the

numerous flaws of the Petition in raising redundant Ground 2 add collective weight in favor of discretionary denial. *See* §§ IV–V, *supra*.

D. The Petition fails to establish a reasonable likelihood that Best in view of Gryzhin renders obvious the claimed weir and reservoir arrangement of claim 1 (Ground 3)

The Board need not reach the substantive merits of Ground 3 of the Petition because it purports to rely on a reference (Gryzhin) that does not qualify as a prior art printed publication. *See* § VI, *supra*. As explained above, Gryzhin is dated after the effective filing date of the '457 patent. *Id.* In any event, Ground 3 of the Petition is woefully deficient on the merits. To illustrate the futility the alternative reliance on Gryzhin under Ground 3 of the Petition, certain example substantive deficiencies are identified as follows.

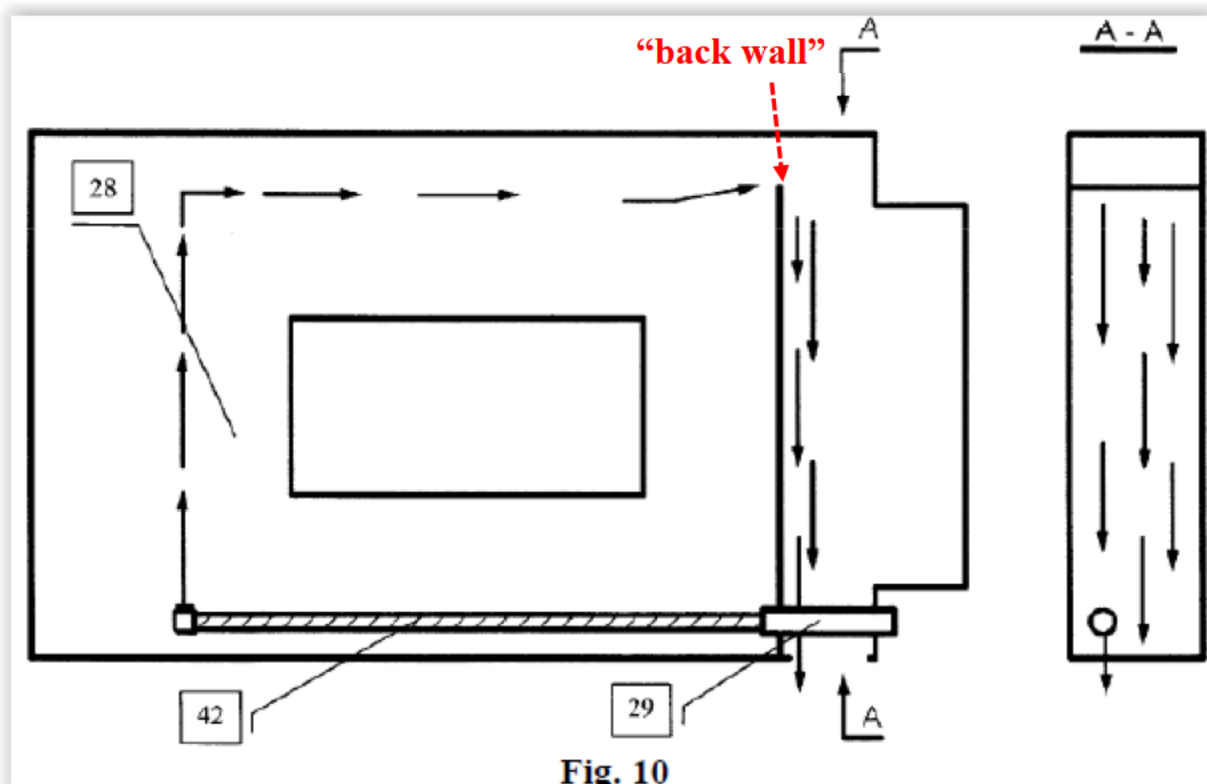
Among other substantive deficiencies, the Petition fails to establish a reasonable likelihood that Best in view of Gryzhin renders obvious the claimed weir and reservoir arrangement recited in the challenged claims. In addressing what Petitioner refers to as “Limitation 1[c],” Petitioner first cites to the assertion of Best raised in Ground 1. Pet. 51. Petitioner’s redundant assertion of Best under Ground 3 is deficient for the myriad of reasons addressed above. *See, e.g.,* §§ II, IX.A, IX.B.1, *supra*.

Gryzhin has not been shown to cure the example deficiencies identified herein concerning Best. Among other substantive deficiencies, for example, the Petition overlooks several explicit structural requirements directed to the “weir,” including at least the following:

- (1) the “weir” must be “integrated horizontally into the long wall of the tank”;
- (2) the “weir” must further be “adjacent all appliance slots”;
- (3) the structural interrelationship expressed as “slots” and adjacent “weir” being arranged “vertically” and “horizontally,” respectively, relative to “the long wall of the tank”; and
- (4) the “weir” must be “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.”

First, Petitioner fails to establish Gryzhin expressly or even inherently discloses a “weir” that is “integrated horizontally into the long wall of the tank” (as recited in all challenged claims). Petitioner first argues Gryzhin’s “back wall of the container 37” is a “weir” as claimed. Pet. 52. Without further explanation, Petitioner then bizarrely argues the “back wall of the container 37” somehow is *itself* “integrated horizontally into the long wall” ostensibly because of its “alignment ... with the mounted electrical devices.” *Id.* The “back wall” in Gryzhin cannot logically satisfy *both* the claimed “long wall” *and* the distinct “weir” structure defined (in part) as being “integrated horizontally into the long wall.” Indeed, in asserting Gryzhin, Petitioner fails to identify anything that is allegedly “integrated horizontally into the long wall.”

This example deficiency may be illustrated by Gryzhin’s Fig. 10, reproduced below, which is the only figure of Gryzhin reproduced in the Petition in addressing what Petitioner refers to as “Limitation 1[c].”



Ex-1011, Fig. 10 (colored annotations added by MGT). That Gryzhin’s “back wall” allegedly allows fluid to flow over the top thereof has not been shown to disclose or suggest a “weir” that is “*integrated horizontally into* the long wall of the tank” (as recited in all challenged claims).

Second, Petitioner *does not even allege* that Gryzhin expressly or even inherently discloses a “weir” that is “adjacent all appliance slots” (as recited in all challenged claims). The only time this interrelated structural arrangement is even mentioned in Ground 3 of the Petition is in a header that reproduces the claim language. Petitioner has not and cannot prove obviousness by simply ignoring explicit claim requirements. This additional example deficiency is also underscored by Fig. 10 of Gryzhin, reproduced above. There is no weir illustrated or described

that is adjacent all appliance slots. At best, Gryzhin discloses the heated fluid must travel upward to overflow *over the top* of the “back wall.” This occurs at a location that is not illustrated or described as being “adjacent” to any “appliance slots,” much less through a “weir” that is “horizontally integrated into the long wall of the tank.”

Third, Petitioner also overlooks the structural interrelationship expressed as “appliance slots” and an adjacent “weir” being arranged “vertically” and “horizontally,” respectively, relative to “the long wall of the tank.” Petitioner has not met its evidentiary burden merely by offering the conclusory statement and circular statement, “given the alignment of the ‘back wall of the container 37’ with the mounted electrical devices, a POSITA would understand that the weir is integrated horizontally into the long wall.” Pet. 53. Moreover, because Petitioner has failed to establish that Gryzhin teaches a “weir” that is “*integrated into* the long wall of the tank,” the qualification “*horizontally* integrated” likewise is not shown.

Finally, Petitioner does not even allege that Gryzhin teaches a “weir” that is “adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot” (as recited in all challenged claims). Rather than address what the claim language expressly requires, Petitioner argues “a POSITA would also understand that the ‘overflow lip’ would provide substantially uniform recovery because of its positioning along the entire ‘back wall of the container 37.’” Pet. 52. Contrary to what Petitioner suggests, the claim language does not recite “uniform recovery” in the abstract. Rather, it expressly requires “uniform recovery *of the dielectric fluid flowing through each appliance slot.*” This explicit

qualification of the “uniform recovery” as pertaining to “the dielectric fluid flowing through each appliance slot” has not and cannot be shown merely by ignoring this claim language.

Thus, even if one were to set aside that the Examiner found Best to be deficient and Gryzhin does not qualify as a prior art printed publication, and to the extent the Board even reaches the substantive merits of Ground 3, Ground 3 of the Petition should still be denied as woefully deficient on the substantive merits. These example substantive deficiencies identified herein are fatal as to all challenges raised under Ground 3 of the Petition. Furthermore, the numerous flaws of the Petition in raising redundant Ground 3 add collective weight that further favors discretionary denial. *See* §§ IV–V, *supra*.

E. The Petition fails to establish *prima facie* obviousness of the challenged dependent claims.

Because Petitioner has failed to meet its burden to prove unpatentability of independent claims under any ground, the challenged dependent claims likewise have not been shown to be unpatentable.

X. CONCLUSION

For the foregoing reasons, MGT respectfully requests that the Petition be denied in its entirety.¹⁷

¹⁷ Patent Owner does not concede, and specifically denies, that there is any legitimacy to any arguments in the Petition that are not specifically addressed herein.

IPR2021-01176
U.S. Patent No. 10,405,457

Date: October 14, 2021

Respectfully submitted,

By: /Brett Mangrum /
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IPR2021-01176
U.S. Patent No. 10,405,457

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Preliminary Response to Petition complies with the type-volume limitation of 37 C.F.R. § 42.24(b)(1) because it contains fewer than the limit of 14,000 words, as determined by the word-processing program used to prepare the brief, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a)(1).

Date: October 14, 2021

By: /Brett Mangrum /
Ryan Loveless; Reg. No. 51,970
Brett A. Mangrum; Reg. No. 64,783
Attorneys for Patent Owner

IPR2021-01176
U.S. Patent No. 10,405,457

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e), I certify that I caused to be served an electronic copy of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE, along with any accompanying exhibits filed via the PTAB E2E system, to Petitioner's counsel at the following addresses identified in the Petition's consent to electronic service:

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Date: October 14, 2021

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